

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Canceled)

Claim 2 (Currently Amended)

~~A substrate treating apparatus as defined in claim 1;~~ A substrate treating apparatus for performing cleaning treatment of substrates, comprising:

a treating tank for receiving a cleaning liquid introduced through a bottom thereof, and allowing an excess amount of the cleaning liquid to overflow a top thereof;

liquid introduction pipes arranged in the bottom of said treating tank for introducing the cleaning liquid in to the treating tank;

liquid feed piping connected to said liquid introduction pipes for feeding the cleaning liquid to the liquid introduction pipes;

a switch valve mounted in an intermediate position on said liquid feed piping; and

a controller operable, based on timing given by an internal timer thereof during the cleaning treatment of the substrates placed in said treating tank, to control said switch valve

~~wherein said flow control means is arranged to repeat a supplying step for supplying the cleaning liquid from said liquid feed piping, and a suspending step for suspending supply of the cleaning liquid.~~

Claim 3 (Currently Amended)

A substrate treating apparatus as defined in claim 2, wherein said controller is arranged to control said switch valve to suspend the supply of the cleaning liquid ~~is stopped~~ for five to 30 seconds ~~in the suspending step.~~

Claim 4 (Currently Amended)

A substrate treating apparatus as defined in claim 2, wherein said controller is arranged to control said switch valve to supply the cleaning liquid for a longer time is set for supplying the cleaning liquid in the when initially supplying step executed first the cleaning liquid, than in the when supplying step executed subsequently.

Claim 5 (Withdrawn)

A substrate treating apparatus as defined in claim 1, wherein said flow control means is arranged to repeat a first supplying step for supplying the cleaning liquid at a first flow rate, and a second supplying step for supplying the cleaning liquid at a second flow rate different from said first flow rate.

Claim 6 (Withdrawn)

A substrate treating apparatus as defined in claim 1, wherein said flow control means is arranged to repeat a cold water supplying step for supplying the cleaning liquid at room temperature, a suspending step for suspending supply of the cleaning liquid at room temperature, a warm water supplying step for supplying the cleaning liquid heated, and a suspending step for suspending supply of the cleaning liquid heated.

Claim 7 (Withdrawn)

A substrate treating apparatus as defined in claim 6, wherein said flow control means is arranged to execute said cold water supplying step at a final stage of the cleaning treatment of the substrates.

Claim 8 (Currently Amended)

A substrate treating apparatus as defined in claim 2 †, further comprising:
a chemical introducing device mounted in an intermediate position on said liquid feed
piping between said switch valve and said treating tank; and
a branch pipe for supplying a chemical solution into said chemical introducing device;

wherein said controller is arranged to introduce the chemical solution from said branch pipe into said chemical introducing device substrate treating apparatus is arranged to store a the chemical solution in said treating tank solution before the cleaning treatment of the substrates, thereby allowing the substrates to be and immersed the substrates in said chemical solution for chemical treatment of the substrates.

Claim 9 (Withdrawn)

A substrate treating method for performing cleaning treatment of substrates immersed in a cleaning liquid inside a treating tank while introducing the cleaning liquid from cleaning liquid supply means into the treating tank through a bottom thereof, and allowing an excess amount of the cleaning liquid to overflow a top of the treating tank,

wherein flow control means varies with time a feeding flow rate of the cleaning liquid from said cleaning liquid supply means during the cleaning treatment of the substrates immersed in the cleaning liquid inside said treating tank.

Claim 10 (Withdrawn)

A substrate treating method as defined in claim 9, wherein said flow control means repeats a supply step for supplying the cleaning liquid and a suspending step for suspending supply of the cleaning liquid during the cleaning treatment of the substrates immersed in the cleaning liquid inside the treating tank.

Claim 11 (Withdrawn)

A substrate treating method as defined in claim 10, wherein the supply of the cleaning liquid is stopped for five to 30 seconds in the suspending step.

Claim 12 (Withdrawn)

A substrate treating method as defined in claim 10, wherein a longer time is set for supplying the cleaning liquid in the supplying step executed first than in the supply step executed subsequently.

Claim 13 (Withdrawn)

A substrate treating method as defined in claim 9, wherein said flow control means repeats, during the cleaning treatment of the substrates immersed in the cleaning liquid inside said treating tank, a first supplying step for supplying the cleaning liquid at a first flow rate, and a second supplying step for supplying the cleaning liquid at a second flow rate different from said first flow rate.

Claim 14 (Withdrawn)

A substrate treating method as defined in claim 9, wherein said flow control means repeats, during the cleaning treatment of the substrates immersed in the cleaning liquid inside said treating tank, a cold water supplying step for supplying the cleaning liquid at room temperature, a suspending step for suspending supply of the cleaning liquid at room temperature, a warm water supplying step for supplying the cleaning liquid heated, and a suspending step for suspending supply of the cleaning liquid heated.

Claim 15 (Withdrawn)

A substrate treating method as defined in claim 14, wherein said flow control means executes said cold water supplying step at a final stage of the cleaning treatment of the substrates.

Claim 16 (Withdrawn)

A substrate treating method as defined in claim 9, wherein a chemical solution is stored in said treating tank before the cleaning treatment of the substrates, and the substrates are immersed in said chemical solution for chemical treatment of the substrates.